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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,298	03/10/2006	Dirk Simon	PP/1-22950/CGM 533/PCT	6245
324	7590	01/28/2010	EXAMINER	
Ciba Corporation Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			DOLLINGER, MICHAEL M	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			01/28/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/571,298	Applicant(s) SIMON ET AL.	
	Examiner MIKE DOLLINGER	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 14, 15 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 14, 15 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/05/2006 and 01/18/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

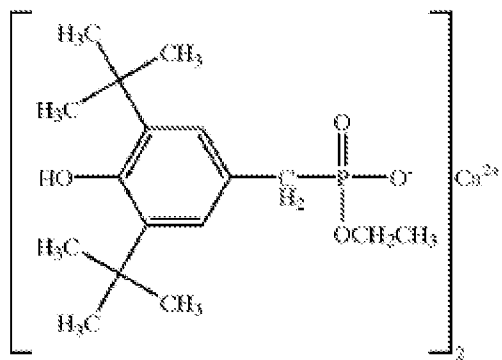
DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

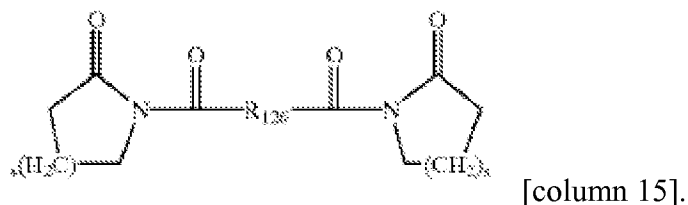
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-8, 14, 15 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfaendner et al (US 6,028,129) in view of Loontjens et al (US 6,395,869 B2).
2. Pfaendner teaches a process for increasing the molecular weight of polycondensates by processing with a mixture of several compounds at a temperature above the melting point [abstract]. The polycondensate may be a polyester [column 2 line 41] which is preferably polyethylene terephthalate, polybutylene terephthalate or polyethylene naphthalate [column 5 lines 62-64]. The processing temperature for polyethylene terephthalate is 260-310°C and for polybutylene terephthalate is 230-280°C [column 24 lines 59-65]. The composition preferably includes a phosphonate which is included in an amount of 0.25% in the inventive examples [Table 1] and preferably includes a phosphonate of the formula;



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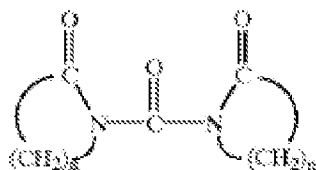
The composition may also include difunctional acyllactams of the formula:



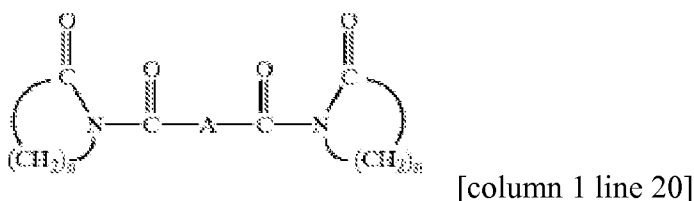
The composition may also include bisoxazolines [column 14 line 37].

3. While Pfaendner discloses the use of acyllactams of the above formula, Pfaendner does not disclose acyllactams of the elected species of claim 5 of formula (Ia).

4. Loontjens teaches bislactam compounds of the formula



which are useful for increasing the molecular weight of a polyamide or polyester and wherein n is an integer of between 3 and 15, preferably 5 and 12 [column 1 lines 49-65]. This carbonyl bislactam is included in an amount of 0.1wt% to 4wt% relative to polyamide or polyester [column 2 lines 5-10]. The polyester is preferably polyethylene terephthalate, polybutylene terephthalate or poly ethylene naphthalate [column 2 lines 35-37]. The process is carried out by melt mixing the components [column 2 lines 40-49]. Loontjens teaches that these carbonyl bislactams avoids the drawbacks [column 1 lines 43-45] of acyllactams of the formula



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including relatively low reaction rate and discoloration of the polyester or polyamide [column 1 lines 29-33].

5. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have increased the molecular weight of a polyester by melt processing with calcium phosphonate and a carbonylbislactam because Pfaendner teaches that it is within the skill of the art to increase the molecular weight of a polyester by melt processing with a calcium phosphonate and a bis-N-acyl lactam and Loontjens teaches that it is within the skill of the art to increase the molecular weight of a polyester by melt processing with a carbonyl bislactam. One would have been motivated to use a carbonyl bislactam in place of a bis-N-acyl lactam because Loontjens teaches that the carbonyl bislactam overcomes the drawbacks of the bis-N-acyl lactam such as relatively low reaction rate and discoloration of the polyester. Absent any evidence to the contrary, there would have been a reasonable expectation of success in replacing the acyllactam of Pfaendner with the acyllactam of Loontjens.

6. Regarding claim 17, Examiner has calculated the range of the ratio of bislactam to phosphonate based on the above cited amounts and found that it is 1:2.5 to 16:1. Regarding the various ranges of amounts of components in the instant claims and any corresponding ranges of amounts of components in the prior art: in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior a *prima facie* case of obviousness exists. See *In re Wertheim*, 541 F.2d 257, 1911 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

Response to Arguments

7. Applicant's arguments filed 09/28/2009 have been fully considered but they are not persuasive.

8. Applicants argue that there are unexpected results with the present invention due to the combination of the polycondensate with the elected species of bis-acyllactam and phosphonate. This argument is not convincing. With regards to Applicants' allegation of unexpected results found in the present invention, Applicants are reminded that any showing of unexpected results must meet three criteria: a) the experimental data must compare the claimed invention to the analogous invention of the prior art, b) the showing must be commensurate in scope with the present claims, and c) the results must be, in fact, unexpected. In the instant case the showings do not meet at least criteria a) and b):

a. The difference between the closest prior art and the present invention is that the prior art has a combination of polyester and the elected phosphonate and non-elected acyllactam whereas the claims require a combination of polyester and the elected phosphonate and elected acyllactam. In order to show unexpected results over the prior art, Applicants must submit evidence comparing the prior art composition to inventive compositions wherein the only difference is in the specific combination of phosphonate and acyllactam; all other amounts, processing and types of components must be comparable.

b. Criterion b) cannot be met until criterion a) has been met. But Applicants are reminded that unexpected results must be shown in experimentation for the full breadth of each claimed range and genus. If no range is claimed for an amount of a component,

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than the range is assumed to be "greater than zero and less than 100% of the total composition" and unexpected results must be shown for the full breadth of this range as well. For a large or limitless claimed genus, Applicants are not required to experiment with each and every species of the genus, but rather show unexpected results for several species representative of each sub-genus. Applicants have shown evidence of unexpected results only for one data point: polyethylene terephthalate comprising 0.3% ALLINCO and 0.1% IRGAMOD 195.

c. Applicants are reminded that any results must be unexpected to one having ordinary skill in the art in order to rebut a *prima facie* case of obviousness. If an improvement is taught in the prior art (including prior art not referenced in the rejection) or would have been expected (improved flame retardancy upon adding a flame retardant additive) it will not rebut a *prima facie* case of obviousness. The current results appear to be unexpected.

9. Additionally, it is unclear to what amounts the percentages in Tables 1 and 2 of the specification refer. Does Example 1 contain 0.3% by weight ALLINCO, or does example 1 contain an unspecified amount of 0.35 solids ALLINCO? Applicants must clarify the compositions of the inventive and comparative examples.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MIKE DOLLINGER whose telephone number is (571)270-5464. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/mmd/

/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796